

**II. AMENDMENTS TO THE DRAWINGS:**

The attached sheet of drawings includes changes to Figure 1. This sheet, which includes Figure 1, replaces the original sheet including Figure 1. In Figure 1, the label “PRIOR ART” has been added as required by MPEP § 608.02(g).

Attachment: One Replacement Sheet

One Annotated Sheet Showing Changes

### III. REMARKS

The drawings have been amended to label Figure 1 as “PRIOR ART” in accordance with MPEP § 608.02(g).

By the present amendment, claims 12-14 and 16 have been amended. Specifically, claims 12-14 and 16 have been amended to replace the term “pallet” with --pallet-stone-- as supported on page 1, lines 1-4, of Applicants’ specification as originally filed. Applicants point out that a “pallet-stone” and a “pallet” are two different components of a time keeping device (See, e.g., ILLUSTRATED PROFESSIONAL DICTIONARY OF HOROLOGY I + II 41 and 809 (2002), a copy of which is filed herewith). Independent claim 12 has also been amended to recite “said seat having a longitudinal axis” and “a second jaw is movable between a first unclamped position in which the pallet-stone may be introduced into the seat and be shifted therein along said longitudinal axis” as supported by Figures 2a and 2b, and on page 5, lines 4-17, and on page 5, line 34, to page 6, line 9, of Applicants’ disclosure as originally filed. Claim 12 has also been amended to recite

“a second clamped position in which the jaws clamp the pallet-stone fixedly and immobilize the pallet-stone in the seat and wherein the first jaw has two flat clamping surfaces in alignment and separated by a recess, and wherein the second jaw has a clamping surface disposed essentially parallel to facing the two clamping surfaces of the first jaw in the clamped position”

as supported by Figures 2a and 2b of Applicants’ disclosure as originally filed.

The present amendment adds no new matter to the above-captioned application.

#### A. The Invention

The present invention pertains to a device for fixing a pallet-stone on an escapement anchor, such as may be employed in watch movement. In accordance with an embodiment of the present invention, a device for fixing a pallet-stone on an escapement anchor is provided

having features recited by independent claim 12. Various other embodiments of the present invention are recited by the dependent claims.

An advantage provided by the embodiments of the present invention is that a device for fixing a pallet-stone on an escapement anchor is provided wherein attachment of the pallet-stone to an escapement anchor is achieved by a seat comprising a shape memory alloy. In view of this structure, attachment of the pallet-stone to the seat can be achieved without using a shellac adhesive. In accordance with the present invention, the seat has a longitudinal axis so that the pallet-stone may be inserted and shifted along the longitudinal axis of the seat, and two flat clamping surfaces of the first jaw are in alignment and are separated by a recess, and the clamping surface of the second jaw is essentially parallel to the two clamping surfaces of the first jaw when in the clamped position.

**B. The Rejections**

Claims 12-16 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Baumgartner (U.S. Patent 4,293,942, hereafter the “Baumgartner Patent”) in view of Simon-Vermot (U.S. Patent 3,738,101, hereafter the “Simon-Vermot Patent”). Claims 12-15 also stand rejected under 35 U.S.C. § 103(a) as unpatentable over the Baumgartner Patent in view of Church (U.S. Patent 581,535, hereafter the “Church Patent”).

In view of the present amendment, Applicants respectfully traverse the Examiner’s rejections and request reconsideration of the above-captioned application for the following reasons.

**C. Applicants’ Arguments**

A prima facie case of obviousness requires a showing that the scope and content of the prior art teaches each and every element of the claimed invention, and that the prior art

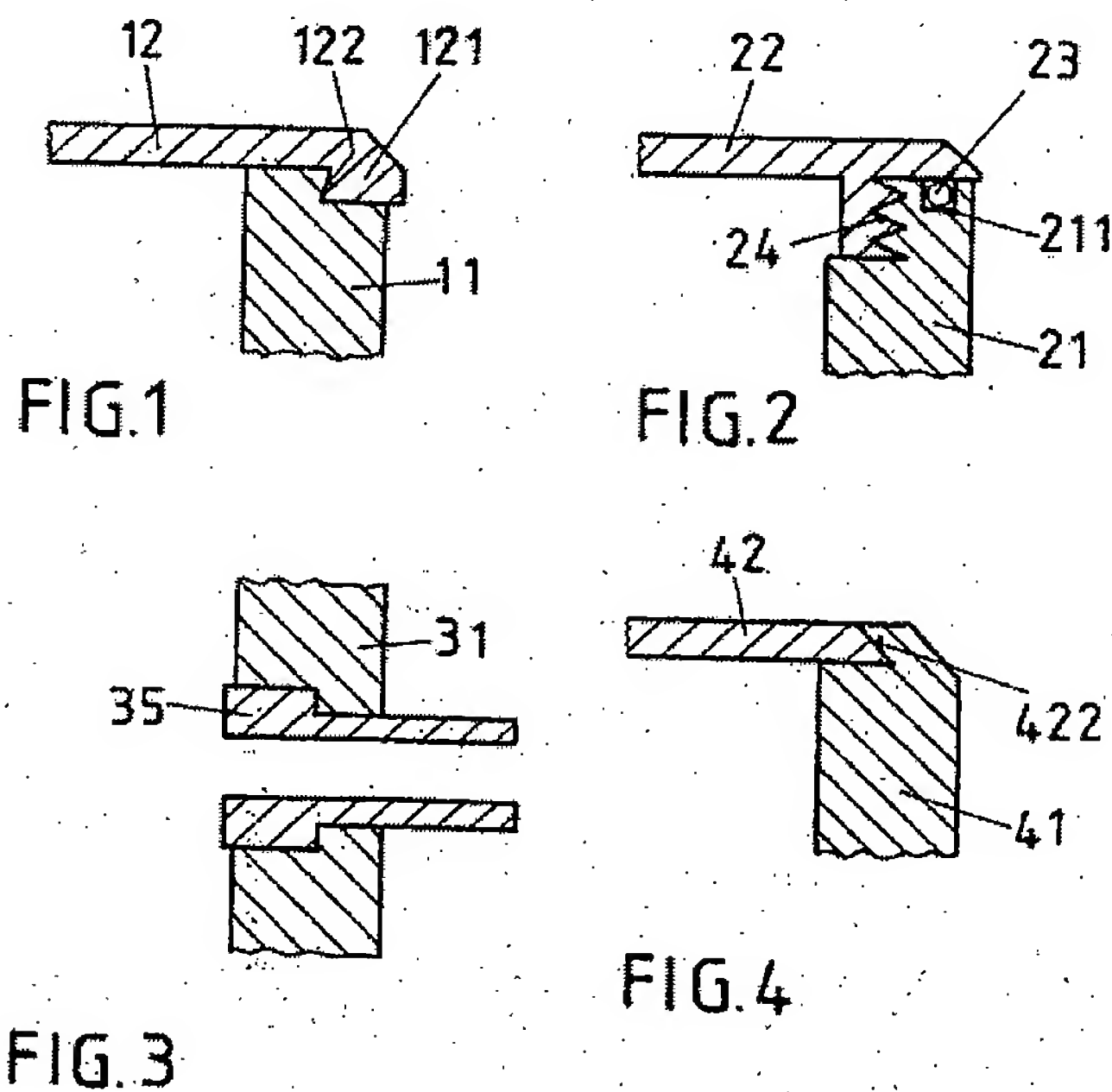
provides some teaching, suggestion or motivation, or other legitimate reason, for combining the references in the manner claimed. KSR International Co. v. Teleflex Inc., 127 S.Ct. 1727, 1739-41 (2007); In re Oetiker, 24 U.S.P.Q.2d 1443 (Fed. Cir. 1992). In this case, the Examiner has failed to establish a prima facie case of obviousness against the claimed invention because the combination of the Baumgartner Patent, the Simon-Vermot Patent and the Church Patent fails to teach each and every limitation of the claims, the Baumgartner Patent is non-analogous art and the Examiner has failed to adduce a legitimate reason to combine the disclosures of the three patents, and the Examiner has failed to demonstrate that a person of ordinary skill in the art would have had a reasonable expectation of success of arriving at the claimed invention even if the combination were made.

**i. The Baumgartner Patent**

The Baumgartner Patent discloses a “waterproof watch and method for making,” wherein a waterproof watch having a case (11) and a base (12), as shown in Figure 1, which are sealed in a water tight manner without the use of screw threads, wherein the watch base (12) is composed of a memory form alloy which may or may not be reversible (See Abstract of the Baumgartner Patent). According to the Baumgartner Patent, the watch base (12) is deformed while in its Martensitic state and loosely fit adjacent a sealing portion of the case (11) and then the base (12) is permitted to rise above the Martensit/Austenit conversion temperature into its Austenitic state so that it returns to its undeformed shape and engages the sealing portion of the case (11) in a water tight pressure fitting manner (See Abstract of the Baumgartner Patent). The Baumgartner Patent also discloses that the conversion temperature is -20°C. or below, and that a tubular conduit for the winding stem may also be composed of the memory form alloy for sealing engagement with the case (See Abstract of the Baumgartner Patent).

As admitted by the Examiner, the Baumgartner Patent does not teach, or suggest, (i) “at least one seat provided to receive the pallet-stone” and (ii) “wherein a portion of the anchor comprising the seat comprises a shape memory alloy adapted to undergo a reversible transformation from an austenitic crystallographic phase into a martensitic crystallographic phase” as recited by independent claim 12. The fact is that, as would be instantly understood by a person of ordinary skill in the art, the Baumgartner Patent pertains to a watch comprising an encasement (11) and a base (12) adapted to be detachably connected to the encasement in a watertight manner to form a seal, wherein the base (12) is made of reversible memory form alloy. **The Baumgartner Patent does not teach, or suggest, that the case is made of memory form alloy.**

As would be instantly understood by a person of ordinary skill in the art, the Baumgartner Patent does not pertain to a “device for fixing a pallet-stone on an escapement anchor.” Instead, the Baumgartner Patent pertains to forming a watertight joint between a base (2) and a case (11) of a watch as shown in Figures 1, 2 and 4. These Figures of the Baumgartner Patent are reproduced below for the Examiner’s convenience.



One look at Figures 1-4 of the Baumgartner Patent, and it is self-evident that the Baumgartner Patent has absolutely nothing to do whatsoever with a pallet-stone, an escapement anchor, or with fitting a pallet-stone on an escapement anchor. In other words, a person of ordinary skill in the art would immediately appreciate that the subject matter disclosed by the Baumgartner Patent is **non-analogous art** pertaining to fitting together a case and a base of a watch to provide a watertight fit, which is not related to fitting a pallet-stone on an escapement anchor.

The Examiner contends that the encasement (11) shown in Figure 4 of the Baumgartner Patent includes a “seat” provided to receive an “insert” (i.e., base (42)) and that the “seat” is bounded by “jaws” (41) and (422), wherein (41) includes a “first jaw” that is fixed and a “second jaw” that is moveable between an unclamped position in which the base (42) can be inserted into the seat and be shifted therein, and that the “first jaw” has “two clamping surfaces” (Office Action, dated June 17, 2008, at 2, line 22, to 3, line 10). The Examiner mischaracterizes the subject matter disclosed by the Baumgartner Patent because assuming *arguendo* that element (41) is the “first jaw” and element (422) is the “second jaw” as the Examiner contends (which is not a valid assumption), it is plainly evident from Figure 4 that the “first jaw” (41) does not have “two flat clamping surfaces in alignment” as recited by claim 12. Thus, the Baumgartner Patent fails to teach, or suggest, (iii) “the first jaw has two flat clamping surfaces in alignment” as recited by independent claim 12.

These are not the only deficiencies in the disclosure of the Baumgartner Patent. The Baumgartner Patent also does not teach, or suggest, (iv) “the first jaw has two flat clamping surfaces...separated by a recess,” and (v) “the second jaw has a clamping surface disposed essentially parallel to facing the two clamping surfaces of the first jaw in the clamped position” as recited by claim 12. Specifically, the Examiner has not, and cannot, show that element (41) is a “first jaw” having two clamping surfaces and that element (422) is a

“second jaw” having a “clamping surface.” The Examiner also has not shown, and cannot show, that the alleged “clamping surface” of element (422) is “essentially parallel” to the alleged “two clamping surfaces” of element (41) in the “clamping position” shown in Figure 4.

Claim 12 recites

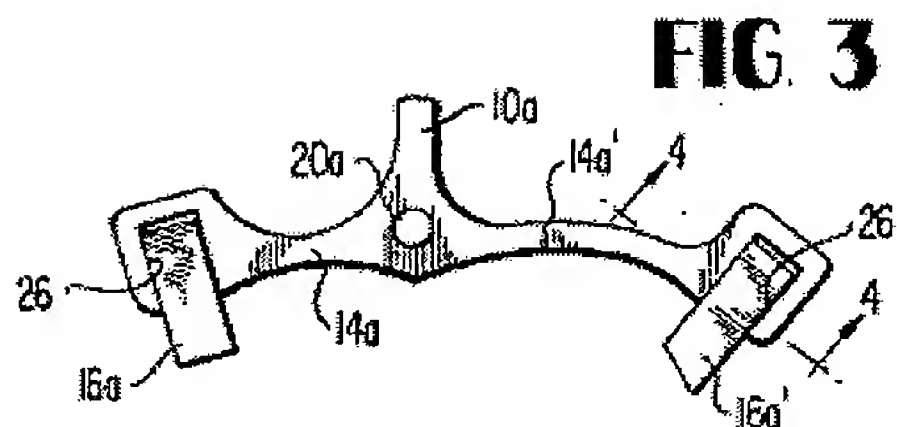
“wherein the seat is bounded by jaws configured to re-close in a direction of the seat, wherein a first jaw is fixed and a second jaw is movable between a first unclamped position in which the pallet-stone may be introduced into the seat and be shifted therein along said longitudinal axis, and a second clamped position in which the jaws clamp the pallet-stone fixedly and immobilize the pallet-stone in the seat and wherein the first jaw has two flat clamping surfaces in alignment and separated by a recess, and wherein the second jaw has a clamping surface disposed essentially parallel to facing the two clamping surfaces of the first jaw in the clamped position.”

This combination of limitations of the present invention allows the adjustment of the penetration of the pallet-stone in the seat by sliding the pallet-stone in the seat along the longitudinal axis of the seat. The Baumgartner Patent simply does not include the combination of features listed above that would permit a pallet-stone to be adjusted in the seat of the device. In other words, **three** clamping surfaces (i.e., the two clamping surfaces of the first jaw and the clamping surface of the second jaw) are employed by the present invention to provide the proper static fixation against three parallel contact surfaces of the pallet-stone. This feature is neither taught, nor suggested, by the Baumgartner Patent.

## **ii. The Simon-Vermot Patent**

The Simon-Vermot Patent discloses a “timepiece escapement lever,” as shown in Figure 3, which includes lever (10a) that has arms (14a), (14a’) and jaws defining slots (26), (26’), wherein fitted pallets (16a), (16a’) are placed. Figure 3 of the Simon-Vermot Patent is reproduced below for the Examiner’s convenience.





As evident from Figure 3, the “jaws” do not include three clamping surfaces. In other words, the Simon-Vermot Patent does not teach, or suggest,

“the first jaw has two flat clamping surfaces in alignment and separated by a recess, and wherein the second jaw has a clamping surface disposed essentially parallel to facing the two clamping surfaces of the first jaw in the clamped position”

as recited by claim 12. The Simon-Vermot Patent also does not teach, or suggest, that “a portion of the anchor comprising the seat comprises a shape memory alloy adapted to undergo a reversible transformation from an austenitic crystallographic phase into a martensitic crystallographic phase” as recited by independent claim 12.

### iii. The Church Patent

The Church Patent discloses a “balance escapement” as shown in Figure 1, wherein the escapement lever (b) is provided with circular stone-receiving holes (d) for receiving cylindrical stones (e), (Church Patent, col. 1, line 40, to col. 2, line 62). As shown in Figure 3, the corrugations (f’) can be made with respect to hole (f), which allows the hole (f) to yield when the jewel (g) is wedged therein (Church Patent, col. 2, lines 71-80).

The Church Patent does not teach, or suggest, “a portion of the anchor comprising the seat comprises a shape memory alloy adapted to undergo a reversible transformation from an austenitic crystallographic phase into a martensitic crystallographic phase” as recited by independent claim 12. The Church Patent also does not teach, or suggest,

“the first jaw has two flat clamping surfaces in alignment and separated



by a recess, and wherein the second jaw has a clamping surface disposed essentially parallel to facing the two clamping surfaces of the first jaw in the clamped position”

as recited by claim 12.

#### **iv. Summary of the Disclosures**

The combination of the Baumgartner Patent with either the Simon-Vermot Patent or the Church Patent would still fail to teach, or suggest, (i) “a portion of the anchor comprising the seat comprises a shape memory alloy adapted to undergo a reversible transformation from an austenitic crystallographic phase into a martensitic crystallographic phase” and (ii)

“the first jaw has two flat clamping surfaces in alignment and separated by a recess, and wherein the second jaw has a clamping surface disposed essentially parallel to facing the two clamping surfaces of the first jaw in the clamped position”

as recited by claim 12. Therefore, the Examiner has failed to establish a prima facie case of obviousness against claims 12-16 of the above-captioned application.

#### **v. No Legitimate Reason to Combine the Disclosures**

A proper rejection under Section 103 requires showing (1) that a person of ordinary skill in the art would have had a legitimate reason to attempt to make the composition or device, or to carry out the claimed process, and (2) that the person of ordinary skill in the art would have had a reasonable expectation of success in doing so. PharmaStem Therapeutics, Inc. v. ViaCell, Inc., 491 F.3d 1342, 1360 (Fed. Cir. 2007). In this case, the Examiner has failed to demonstrate that a person of ordinary skill in the art would have had a legitimate reason to combine the subject matter of the Baumgartner Patent, which is non-analogous art pertaining to making a case and base joint using particular materials, to the problem of fixing a pallet-stone to a seat. Furthermore, the Baumgartner Patent discloses that the choice of

materials employed in making the case-base joint is to create a water-tight seal (See Abstract of the Baumgartner Patent), which is a purpose not even remotely related to the present invention.

In addition, the claim 12 recites

“wherein the seat is bounded by jaws configured to re-close in a direction of the seat, wherein a first jaw is fixed and a second jaw is movable between a first unclamped position in which the pallet-stone may be introduced into the seat and be shifted therein along said longitudinal axis, and a second clamped position in which the jaws clamp the pallet-stone fixedly and immobilize the pallet-stone in the seat and wherein the first jaw has two flat clamping surfaces in alignment and separated by a recess, and wherein the second jaw has a clamping surface disposed essentially parallel to facing the two clamping surfaces of the first jaw in the clamped position.”

This arrangement makes it possible to adjust operation of an escapement with ease and without any risk of damaging the escapement anchor or the pallet-stone, and enables secure fixation of the pallet-stone into a seat without the use of adhesives.

In this respect, the Baumgartner Patent does not provide any teaching, suggestion, or guidance whatsoever pertaining to the shape of the seat in which the base is fixed. The Baumgartner Patent also does not teach or suggest that the joint formed between the case and the base can be used to adjust the penetration of the “insert” as the Examiner calls it into the seat. As would be instantly understood by a person of ordinary skill in the art, the watertight joint formed between the Baumgartner’s case and base is not adjustable. On the contrary, the joint formed between Baumgartner’s case and base must be a unique, fixed structure and not an adjustable one in order to effect a watertight seal. Thus, the position where base (42) abuts “first jaw” (41) cannot be an adjustable position because the position must form a watertight seal between the base (42) and the case (41).

In view of the above facts and because it is a requirement for an escapement anchor that it be able to adjust the degree of penetration of the pallet-stone in the seat, a person of ordinary skill in the art would not have looked to the Baumgartner Patent for a solution regarding fixing a pallet-stone to a seat, or even consider combining it with subject matter

disclosed by the Simon-Vermot Patent and/or the Church Patent. For all of the above reasons, the Examiner has failed to establish a prima facie case of obviousness against claims 12-16 of the above-captioned application.

**vi. No Reasonable Expectation of Success of Arriving at Applicants'**

**Claimed Invention**

A proper rejection under Section 103 requires showing that the person of ordinary skill in the art would have had a reasonable expectation of success of achieving the claimed invention in making the combination allegedly rendering the invention as unpatentable. PharmaStem Therapeutics, Inc. v. ViaCell, Inc., 491 F.3d at 1360. In this case, the Examiner has failed to demonstrate that a person of ordinary skill in the art would have had a reasonable expectation of success of arriving at the invention of claim 12 even assuming that the combination of Baumgartner with Simon-Vermot and/or Church is legitimate (which is an invalid assumption) because, as shown above, multiple elements of the claimed invention are missing from the combination.

Furthermore, the combination of the Baumgartner Patent with the Simon-Vermot Patent and/or the Church Patent, as asserted by the Examiner, would result in using a memory form alloy to make a watch base (12). The Examiner contends that the watch base (12) is an “insert” (Office Action, dated June 17, 2008, at 2, lines 22-24). Upon making the combination of the Baumgartner Patent with the Simon-Vermot Patent, a person of ordinary skill in the art should, according to the Examiner’s contention, make the pallet-stone of memory form alloy because it is the pallet-stone that is “inserted” into the seat. Consequently, the combination alleged by the Examiner would not result in the present invention, wherein “a portion of the anchor comprising the seat comprises a shape memory alloy” as recited by claim 12.

The Examiner must give a fair reading to what a reference teaches as a whole. In re Gordon, 221 U.S.P.Q. 1125, 1126 (Fed. Cir. 1984). Here, the Examiner has failed to realize Baumgartner discloses it is the watch base (12) or (42), and not the case (11) or (41), that is formed of memory form alloy. When properly construed, Baumgartner discloses making the base insert, and not the recess-containing case (i.e., which the Examiner contends has “jaws”), of memory form alloy. Therefore, the combination of Baumgartner with either the Simon-Vermot Patent or the Church Patent would result in a device wherein the pallet-stones are made of metal form alloy. This, of course, is not the same device as the one claimed by the above-captioned application.

For all of the above reason, the Examiner has failed to demonstrate, even if the combination of Baumgartner with Simon-Vermot and/or Church were made, that a person of ordinary skill in the art would have had a reasonable expectation of success of arriving at Applicant’s claimed invention. Therefore, the Examiner has failed to establish a prima facie case of obviousness against claims 12-16 of the above-captioned application.

#### IV. CONCLUSION

The Examiner has failed to establish a prima facie case of obviousness against claims 12-16 of the above-captioned application because the combination of the Baumgartner Patent, the Simon-Vermot Patent and the Church Patent fails to teach each and every limitation of the claimed invention, and the Examiner has failed to establish a legitimate reason for combining the Baumgartner Patent, which is non-analogous art, with either the Simon-Vermot Patent or the Church Patent. Furthermore, the Examiner has failed to demonstrate that a person of ordinary skill in the art, upon combining the disclosures of the Baumgartner Patent, the Simon-Vermot Patent, and the Church Patent, would have enjoyed a reasonable expectation of success because the Baumgartner Patent discloses making an “base” of metal

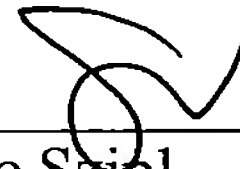
form alloy, wherein the base is inserted into a groove in a case. The Baumgartner Patent does not teach, or suggest, making the case, which the Examiner contends includes "jaws," out of metal form alloy.

For all of the above reasons, claims 12-16 are in condition for allowance and a prompt notice of allowance is earnestly solicited.

Questions are welcomed by the below-signed attorney for Applicant.

Respectfully submitted,

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